

# Algebra 2

## Unit 4: WS #3

### CLASS EXERCISES

Tell whether each expression is a polynomial.

1.  $3xy - 5$

2.  $\frac{1}{4}a^2 + a$

3.  $4x^2 + 3x - \frac{7}{x}$

Classify each polynomial as a monomial, a binomial, or a trinomial.  
Then give the degree of the polynomial.

4.  $0.8x^5 - y$

5.  $\sqrt{11}x^2y^3$

6.  $x^3 - 3x^2y + 3xy^3$

Arrange each polynomial in the indicated order.

7.  $3x + 3x^3 - 2x^4 + 9x^2 - 8$  in descending order of  $x$

8.  $y - 7 + y^2 - 8y^4$  in ascending order of  $y$

Simplify.

9.  $3xy - 2yz - 5xy$

10.  $6c^2 - 4c + 7 - 8c^2$

Add.

11.  $(6x + 12) + (9x + 15)$

12.  $(7x^2 + 8x - 5) + (9x^2 - 9x)$

Subtract.

13.  $(12x - 22) - (19x + 13)$

14.  $(5x^2 - 6x + 8) - (3x^2 - 9)$

### PRACTICE EXERCISES

Classify each polynomial as a monomial, a binomial, or a trinomial.  
Then give the degree of the polynomial.

1.  $-0.7a^{15}$

2.  $4x^3 - \sqrt{13}x + 1$

3.  $-7$

4.  $6x^2y^2 - 4x^5$

Simplify.

5.  $a^2b + 4ab^2 - 5a^2b - ab^2$

6.  $12 + 3m - 5n - m + 4n$

7.  $3x^2 - 5x - x^2 + x + 4x$

8.  $2y^2 + 3xy + y^2 - x - 6xy$

9.  $n^3 + 3n^2 - n - 3 - 3n^3$

10.  $15 - y^2 - 10y - 8 + 8y$

Add.

11.  $\begin{array}{r} 5x^2 - 8x - 13 \\ 9x^2 + 7x - 26 \\ \hline \end{array}$

12.  $\begin{array}{r} 7x^3 - 44x^2 - 23x + 37 \\ 3x^3 \qquad \qquad + 5x - 25 \\ \hline \end{array}$